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TITLE

THE ROLE OF TESTOSTERONE REPLACEMENT THERAPY ON METABOLIC DISORDERS IN PATIENT WITH TYPE 2 DIABETES MELLITUS AND ANDROGEN DEFICIENCY

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ABSTRACT

Introduction: Over the past few decades, obesity and Diabetes mellitus has become a global health challenge. Multiple epidemiological studies have shown that low testosterone levels are associated with and predict the future development of T2D and the metabolic syndrome.

Aim of study: The aim of study was to show the influence of testosterone replacement therapy on obesity, HbA1c level, arterial hypertension and dyslipidemia with patient diabetes mellitus and Androgen deficiency.

Materials and Methods: 125 male patient with diabetes mellitus was screened, 85 subjects with 41-65 years and BMI 27,0 – 48,0 kg/m² were randomized In placebo-controlled study. We divided patients into two groups. 1) First group treatment group where we used diet, physical activity and testosterone replacement therapy (TRT), 2) Second group where we used diet and physical activity. Patient's antidiabetic therapy and placebo.

Results: After six months of treatment we had some positive results on lipid profile but better results was in first group which was clinically significant. Free testosterone level increased in all groups but the best results was in I group. HbA1c decreased in both group but in I group we had the best result. leptin level after treatment was approximately same in both groups.

Discussion: Serum testosterone, glycosylated hemoglobin, high-density lipoprotein cholesterol, triglyceride concentrations, and the BMI, Hypertension improved in both treatment groups after 26 weeks of treatment.

Conclusion: Our study demonstrated that it is possible to break into this vicious circle by raising testosterone levels in diabetic men and low testosterone level. Re-instituting physiological levels of testosterone in hypoandrogenic men as our small study shown, have an important role in reducing the prevalence of diabetic complication.

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